WHAT IS CLAIMED IS:

1. A scan type exposure apparatus, comprising:

a first movable stage on which a first object is to be placed;

a second movable stage on which a second object is to be placed;

a projection optical system for projecting a pattern of the first object on to the second object;

a scanning mechanism for scanningly moving said first and second movable stages in a timed relation with each other, relatively to said projection optical system, while the pattern of the first object is projected by said projection optical system on to the second object;

storing means for storing therein a data corresponding to a change in exposure condition as measured beforehand and to be produced by moving at least one of said first and second movable stages; and

control means for controlling drive of said first and second movable stages in an actual exposure process, while reflecting a correction value, as determined on the basis of the data stored, to the drive of at least one of said first and second movable stages.

2. An apparatus according to Claim 1, wherein the correction value is determined with respect to

plural accelerations or speeds of at least one of said first and second movable stages, and (wherein) the correction value is set variably in accordance with the accelerations or speeds and with directions of them.

3. An apparatus according to Claim 1, wherein the correction value is determined with respect to a deviation of a projected image of the pattern of the first object, upon the second object.

4. An apparatus according to Claim 1, wherein the correction value is determined with respect to a focus error of a projected image of the pattern of the first object, upon the second object.

5. An apparatus according to Claim 3, wherein the scan exposure is performed while controlling a quantity of exposure light in accordance with a speed of at least one of said first and second movable stages.

6. A scanning exposure method wherein a first movable stage on which a first object is placed and a second movable stage on which a second object is placed are scanningly moved in a timed relation with each other, relatively to a projection optical system,

while a pattern of the first object is projected through the projection optical system on to the second object, said method comprising the steps of:

storing a data corresponding to a change in exposure condition as measured beforehand and to be produced by moving at least one of the first and second movable stages; and

performing scan exposure while reflecting a correction value, as determined on the basis of the data stored, to the drive of at least one of the first and second movable stages.

7. A device manufacturing method wherein a first movable stage on which a first object is placed and a second movable stage on which a semiconductor wafer is placed are scanningly moved in a timed relation with each other, relatively to a projection optical system, while a pattern of the first object is projected through the projection optical system on to the wafer, said method comprising the steps of:

storing a data corresponding to a change in exposure condition as measured beforehand and to be produced by moving at least one of the first and second movable stages; and

performing scan exposure while reflecting a correction value, as determined on the basis of the data stored, to the drive of at least one of the first

and second movable stages.

8. A method according to Claim 7, wherein the correction value is determined with respect to plural accelerations or speeds of the first and second movable stages, and wherein the correction value is set variably in accordance with the accelerations or speeds and with directions of them.

9. A method according to Claim 7, wherein the correction value is determined with respect to deviation of a projected image of the pattern of the first object, upon the second object.

10. A method according to Claim 7, wherein the correction value is determined with respect to a focus error of a projected image of the pattern of the first object, upon the second object.

11. A method according to Claim 9, wherein the scan exposure is performed while controlling a quantity of exposure light in accordance with a speed of at least one of the first and second movable stages.

12. A scan type projection exposure apparatus, comprising:

a first movable stage on which a first object is to be placed;

a second movable stage on which a second object is to be placed;

a projection optical system;

scanning means cooperable with said projection optical system, for scanningly moving said first and second movable stages in a timed relation with each other and at a speed ratio corresponding to a projection magnification of said projection optical system so that a pattern of the first object is projected by said projection optical system on to the second object;

detecting means for measuring a position of an image plane of the first object defined by said projection optical system;

storing means for storing therein image plane positions as measured by said detecting means while scanningly moving said first movable stage, as correction values related to image plane positions at different scan positions of said first movable stage; and

driving means for moving the second object in a direction of focus on the basis of the image plane positions stored in said storing means, to set the second object with respect to the image plane position.

13. An apparatus according to Claim 12, wherein, before image plane position measurement during scanning motion of said first movable stage, said detecting means detects image plane position information of the first object defined by said projection optical system as said first movable stage is held fixed, on the basis of which image plane position information said detecting means calculates information related to image plane positions with respect to different scan positions of said first movable stage.

14. An apparatus according to Claim 12, wherein said detecting means includes an illumination light source for projecting illumination light on to the first object, a first slit for passing a portion of the illumination light and provided to the surface of the first object, and light receiving means for detecting light, of the illumination light, passed through said first slit and through said projection optical system, and wherein said detecting means detects information related to image plane positions of the first object with respect to different scan positions of said first movable stage, as defined by said projection optical system, on the basis of a signal produced by said light receiving means.

15. An apparatus according to Claim 12, wherein said detecting means includes an illumination light source for illuminating a second slit mark provided on said second movable stage, and light receiving means for detecting light coming from said second slit mark and through said projection optical system, and wherein said detecting means detects information related to image plane positions of the first object with respect to different scan positions of said first movable stage, as defined by said projection optical system, on the basis of a signal produced by said light receiving means.

16. An apparatus according to Claim 14, wherein said light receiving means detects light passed through said first slit and through said projection optical system and then reflected by a reflection surface, provided on said second movable stage and having a surface step structure, and then again passed through said projection optical system and through said first slit.

17. An apparatus according to Claim 12, wherein the first object is formed with a first pattern for image plane position measurement and an observation window for observation of a surface of said second

movable stage, wherein said second movable stage is formed with a second pattern for image plane position measurement, wherein said detecting means includes an observation system for simultaneous observation of said first and second patterns, such that said detecting means detects information related to image plane positions of the first object with respect to different scan positions of said first movable stage, as defined by said projection optical system, on the basis of said first and second patterns observed by said observation system.

18. A device manufacturing method, including aligning a reticle and a wafer and then projecting and printing a pattern of the reticle on to the wafer by using a scan type projection exposure apparatus as recited in any one of Claims 12 - 17, and then developing the exposed wafer.